

MATTHEW T. COOK

Department of Natural Sciences
University of Missouri Kansas City • Kansas City, MO 64110
mtcook@umkc.edu • PHONE (816) 235-5247

CONTACT

Office:	School of Science and Engineering 5007 Rockhill Road Room 275F Biological Science Building Kansas City, MO 64110	Work: (816) 235-5247 Email: mtcook@umkc.edu
----------------	---	--

EDUCATION

Doctor of Philosophy, Biomedical Sciences	2015
Master of Science, Biology	2010
Bachelor of Science, Cell and Molecular Biology	2007

EMPLOYMENT EXPERIENCE

<i>Associate Teaching Professor (non-Tenure Track):</i> University of Missouri Kansas City – Kansas City, MO	2024 - present
<i>Assistant Professor (Tenure-track):</i> Northwest Missouri State University - Maryville, MO	2022 - 2024
<i>Medical Writer:</i> University of Oklahoma Health Science Center – Oklahoma City, OK	2021 - 2022
<i>Assistant Professor (Tenure-track):</i> Washburn University - Topeka, KS	2015 - 2021
<i>Graduate Research Assistantship:</i> University of Missouri - Columbia, MO	2011 - 2015
<i>Research Assistant:</i> University of Central Missouri - Warrensburg, MO	2008 - 2010
<i>Analyst I:</i> Test America Laboratory - Earth City, MO	2007 - 2008

TEACHING EXPERIENCE

Courses Taught at University of Missouri Kansas City

- BIOL 316 Human Physiology Lab. (08/24)
- LS PHYS 3070 Oral Physiology. (08/24)

Courses Taught at Northwest Missouri State University

- BIOL 438/615 Human Physiology Lecture and Lab. (08/22 – 05/24)
- BIOL 238 Physiology Allied Health Lecture and Lab. (08/22 – 05/24)

- BIOL 510 ST: Is there a use of virtual reality in medicine? (Sp23)

Courses Taught at Washburn University

- BI100 Introduction to Biology: Health Emphasis (08/16 – 05/21)
- BI101 Introduction to Biology Lab (08/20)
- BI250 Intro to Human Anatomy Online (Su19, Su20, Su21)
- BI255 Human Physiology Lecture and Lab (08/15-05/21)
- BI275 Human Anatomy Lecture & Lab (Su 06/18)
- BI380 ST: Cancer Biology (Sp19)
- BI390 Seminar (On rotation: Sp17, Fa18, and Sp20)

PROFESSIONAL DEVELOPMENT

2024	OpenScholar Hands-On Workshop
2024	Getting Out of Your Own Way: Being a Career Educator.
2024	Beyond 'Sit and Get': Research-Based Engagement Structures for All Disciplines.
2024	Inspired by Team-Based Learning: Activities you can incorporate.
2023	Assessing your Courses to Enhance Quality Improvement.
2023	Setting Students Up for Success: Incorporating Library Resources into Northwest Online.
2023	How Trauma-informed Pedagogy Keeps Post-Secondary Students in the Classroom.
2020	Course Success Group: PlayPosit.
2018	Strategies for Active Learning.
2017	Creative Course Condensing: Creating an effective 8-week course.
2016	Do Students See Social Media as a Valuable Learning Tool?
2016	Searching for Grants Workshop.
2016	College of Arts and Science Success Group: Course BI100: Introduction to Biology.
2015	How I Use Low-stakes Quizzing to Enhance Learning?
2015	An Introduction to Evidence-Based Undergraduate STEM Teaching
2014-15	Graduate Leadership Program
2013-14	Preparing Future Faculty

RESEARCH PUBLICATIONS

- Liang, Y., **Cook, M. T.**, & Hyder, S. M. (2024). Cholesterol biosynthesis inhibitor RO 48-8071 suppresses growth of TNBC In vivo and In vitro. *Journal of Cancer Science and Clinical Therapeutics*, 8, 119-125.
- Liang, Y., Besch-Williford, C., **Cook, M. T.**, Belenchia, A., Brekken, R. A., & Hyder, S. M. (2019). APR-246 alone and in combination with a phosphatidylserine-targeting antibody inhibits

- lung metastasis of human triple-negative breast cancer cells in nude mice. *Breast Cancer: Targets and Therapy*, 11, 249. PMID: [31534364](#).
- Cook, M. T.** (2018). Mechanism of metastasis suppression by luteolin in breast cancer. *Breast Cancer: Targets and Therapy*, 10, 89. PMID: [29928143](#).
- Cook, M. T.**, Liang, Y., Besch-Williford, C. L., and Hyder, S. (2017). Luteolin inhibits the metastatic potential of triple-negative breast cancer cells in vivo. *Breast Cancer: Targets and Therapy*, 23:9, 9-19. PMID: [28096694](#).
- Goyette, S., Liang, Y., Mafuvadze, B., **Cook, M. T.**, Munir, M., and Hyder, S. M. (2017). Natural and Synthetic Progestins Enrich Cancer Stem Cell-like Cells in Hormone- Responsive Human Breast Cancer Cell Populations In Vitro. *Breast Cancer: Targets and Therapy*, 2017:9, 1-11. PMID: [28579829](#).
- Cook, M. T.**, Mafuvadze, B., Besch-Williford, C. L., Ellersieck M. R., Goyette, S., & Hyder, S. (2016). "Luteolin suppresses development of medroxyprogesterone acetate-accelerated 7, 12-dimethylbenz (a) anthracene-induced mammary tumors in Sprague-Dawley rats." *Oncology Reports*, 35(2), 825-832. PMID: [26719029](#).
- Cook, M. T.**, Liang, Y., Goyette, S., Mafuvadze, B., Besch-Williford, C., & Hyder, S. (2015). Luteolin inhibits progestin-dependent angiogenesis, stem cell-like characteristics, and growth of human breast cancer xenografts. *Springerplus*, 4(1), 444. PMID: [26312209](#).
- Liang, Y., Besch-Williford, C., Aebi, J. D., Mafuvadze, B., **Cook, M. T.**, Zou, X., & Hyder, S. M. (2014). Cholesterol biosynthesis inhibitors as potent novel anti-cancer agents: suppression of hormone-dependent breast cancer by the oxidosqualene cyclase inhibitor RO 48-8071. *Breast Cancer Research and Treatment*, 146, 51-62. PMID: [24878988](#).
- Mafuvadze, B., **Cook, M.**, Xu, Z., Besch-Williford, C. L., & Hyder, S. M. (2013). Effects of Dietary Apigenin on Tumor Latency, Incidence and Multiplicity in a Medroxyprogesterone Acetate-Accelerated 7, 12-Dimethylbenz(a)anthracene-Induced Breast Cancer Model. *Nutrition and Cancer*, 65, 1184-1191. PMID: [24127693](#).
- Lui, J., Walker, N.M., **Cook, M.T.**, Ootani, A., and Clarke, L.L. (2011). Functional Cftr in Crypt Epithelium of Organotypic Enteroid Cultures from Murine Small Intestine. *American Journal of Physiology-Cell Physiology*, 302, C1492-C1503. PMID: [22403785](#).

PRESENTATIONS AND ABSTRACTS (*Presenter. @Invited Oral Presentation.)

- *Salman M Hyder, **Matthew T Cook** and Yayun Liang. (2018) Re-activation of mutant p53 with APR-246 suppresses stem-cell like properties and lung metastasis of triple-negative breast cancer cells. San Antonio Breast Cancer Symposium. San Antonio, TX. Publication Number: [PT-01-21](#).
- ***Cook, M.T.**, Liang, Y., Besch-Williford, C., and Hyder, S. M. (2017) Luteolin inhibits metastasis of triple-negative breast cancer cells to the lungs. American Association for Cancer Research: Washington D.C., MD. [Abstract #4914](#).
- *Goyette, S., Mafuvadze, B., **Cook, M. T.**, Liang Y., and Hyder, S. M. (2016) Progestin enrichment of the cancer stem cell-like pool provides novel therapeutic targets for hormone-dependent human breast cancer. American Association for Cancer Research: New Orleans, LA. [Abstract #1807](#).
- ***Cook, M. T.**, Liang, Y., Goyette, S., Mafuvadze, B., Besch-Williford, C., and Hyder, S. M. Therapeutic effects of luteolin against progestin-dependent breast cancer involves induction of apoptosis, and suppression of both stem-cell-like cells and angiogenesis. American Association for Cancer Research: Philadelphia, Pennsylvania. [Abstract #4159](#).
- ***Cook, M. T.**, Mafuvadze, B., Besch-Williford, C.; Ellersieck, M., Goyette, S. and *Hyder, S. M. (2015) Luteolin Prevents Development of Progestin-accelerated 7,12-

dimethylbenz(a)anthracene (DMBA)-induced Mammary Tumors in Sprague-Dawley Rats. 97th Annual Endocrine Society Meeting, San Diego, Abstract # SAT-329

Cook, M. T., Liang, Y., Mafuvadze, B., Zhang, J., Goyette, S. and *Hyder, S. M. (2014) Therapeutic and preventive potential of nutraceutical luteolin against progestin-dependent breast cancer. Proceedings of the 19th World Congress on Advances in Oncology, Athens, Greece. Int J. Molecular Medicine 34: Abstract #118.

***@Cook, M.**, Liang, Y., Mafuvadze, B., Besch-Williford, C. L., & Hyder, S. M. 2014. The Nutraceutical Luteolin Inhibits Progestin-Dependent VEGF Induction in Breast Cancer Cells and Blocks Tumor Progression in a Xenograft Model. Endocrine Society Annual Meeting: Chicago, IL. Abstract Mon-0327. Oral Presentation PP38-1.

Mafuvadze, B., ***Cook, M.**, Xu, Z., Besch-Williford, C., and Hyder, S. 2013. Complex effects of dietary apigenin on prevention of MPA-accelerated DMBA-induced mammary tumors in Sprague-Dawley rats. American Association for Cancer Research: Washington D.C., MD. [Abstract #3694](#).

STUDENT RESEARCH PRESENTATIONS

Posters and Oral Presentations

Bunnell, B., Caldwell, D., & **Cook, M.T.** Luteolin's Effect on mRNA in MDA-MB-231 Breast Cancer Cells. 17th K-INBRE Symposium. Overland Park, KS. January 19-20, 2019.

Hernandez, M., & **Cook, M.T.** Luteolin's mechanism of suppressing the PI3K pathway. Apeiron. Washburn University, Topeka, Kansas. April 2018.

SERVICE ACTIVITIES

University Service

- **Committee Member:** *Natural Science Biology Search* 2024 - 2024
- **Faculty Advisor:** *Pre-professional Health Occupation Club (PHOC)* 2023 - 2024
- **Committee Member:** *Northwest Missouri Research Committee.* 2023 - 2024
- **Instructor:** *Science Olympiad (Spring Semester)* 2023 - 2024
- **Committee Member:** *Natural Science Physical Chemistry Search* 2023 - 2024
- **Volunteer:** *Fall NWMSU My Success Recruitment Event in St. Joeseeph* 2022 - 2023
- **Committee Member:** *Natural Science Grade Appeal* 2022 - 2023
- **Committee Member:** *Natural Science Human Anatomy Search* 2022 - 2023
- **Parliamentarian:** *Washburn University Faculty Senate* 2018 - 2020
- **Committee Member:** *Washburn University Honors Advisory Board* 2016 - 2020
- **Poster Judge:** *KINBRE Annual Symposium* 2017 - 2020
- **Reviewer:** *Kansas Academy of Science (KAS)* 2016 - 2020
- **Committee Member:** *Research Grants Committee* 2018 - 2019
- **Committee Member:** *Washburn Vertebrate Biology Search* 2017 - 2018
- **Committee Member:** *Washburn Honors Advisory Board Search* 2017
- **Committee Member:** *Washburn Student Success Committee* 2016 - 2017

- **Committee Chair:** *Washburn Forensic Biology Search Committee* 2016 - 2017
- *MU Dean of the Graduate School Search Committee* 2013 – 2014
- **President:** *MU Graduate Student Association* 2012 - 2013
- **Treasurer:** *MU Graduate Student Association* 2011 - 2012

ADVANCED COURSEWORK

Doctor of Philosophy

Biochemistry (BIOCHM) – BIOCHM 7978: Cancer Biology

Biological Sciences (BIO_SC) – BIO_SC 8460: Advanced Cancer Biology

Statistics (STAT) – STAT 7070: Statistical Method for Research

Veterinary Biomedical Science (V_BSCI) – V_BSCI 7333: Molecular and Cell Biology, V_BSCI 8085: Problems in Vet Biomed, V_BSCI 8420 Veterinary Physiology (Cardiac, Neurology, Renal, Respiratory), and V_BSCI 8421: Veterinary Physiology (GI and Reproductive Physiology)

Veterinary Pathobiology (V_PBIO) – V_PBIO 8641: Introduction to Research Ethics

Master of Science

Biology (BIOL) – BIOL 5954: Eukaryotic Cell Biology, BIOL 5011: Animal Physiology, BIOL 4311: Parasitology, BIOL 5953: Marine Ecology Field Course, BIOL 4515: Molecular Technology Laboratory (Plasmid Cloning, Cell Confluence, DNA Sequencing), BIOL 4400: Endocrinology, BIOL 4013: Introduction to Experimental Design (Statistical Software – SPSS)

Bachelor of Science

Biomedical Sciences (BMS) – BMS 593: Bioinformatics and Biomedical Resources, BMS 582: Embryology, BMS 561: Medical & Pathological Physiology, BMS 530: Cell Biology of Cancer, BMS 528: Mechanisms of Bacterial Pathogenesis, BMS 525 Molecular Biology (Plasmid Cloning), BMS 521: Molecular Cell Biology (Cell Transformation and Transfection, Fluorescence Labeling), BMS 321: Biomolecular Interactions, BMS 308: Human Physiology (w/ Lab), BMS 307: Human Anatomy (w/ Cadaver Lab), BMS 232: Human Genetics Laboratory, BMS 230: Human Genetics.